

IN THE CLAIMS

Please amend the claims as follows, substituting any amended claim(s) for the corresponding pending claim(s):

1 1. (currently amended) A method for channel mixing in a multimedia system, the method  
2 comprises:  
3 receiving, from a multimedia source, a set of selected ~~a set of~~ channels as encoded channel data;  
4 interpreting the encoded channel data to identify a channel of interest of the set of selected  
5 channels based on a specific channel selection request, wherein each channel of the set of selected  
6 channels has a data type;  
7 processing the encoded channel data, which includes data of the channel of interest ~~data of the~~  
8 channel of interest based on the data type ~~type of channel~~ to produce generic data for each channel of the  
9 set of selected channels; ~~and~~  
10 ~~converting~~ combining the generic data into a stream of data; and  
11 transmitting the stream of data to a plurality of client devices, wherein the channel of interest is  
12 accessible from the stream of data by a client device of the plurality of client devices based upon the  
13 specific channel selection request.

1 2. (currently amended) The method of claim 1 further comprises:  
2 receiving the ~~set of channels~~ set of selected channels by receiving packets of the encoded channel  
3 data, wherein the encoded channel data includes channel data from a plurality of tuners associated with a  
4 multimedia source, and wherein each of the packets includes a header portion and payload portion; and  
5 interpreting the encoding channel data by interpreting information of the header portion of the  
6 packets to identify individual channels of the ~~set of channels~~ set of selected channels.

1 3. (currently amended) The method of claim 2, wherein the interpreting the encoded channel data  
2 further comprises:  
3 identifying the channel of interest as one of the individual channels of the ~~set of channels~~ set of  
4 selected channels based on the information of the header portion.

1 4. (original) The method of claim 3 further comprises at least one:  
2 reading an identifier for the channel of interest from the header portion of the packet to identify  
3 the channel of interest; and  
4 reading a source identifier from the header portion of the packet to identify the channel of  
5 interest.

1 5. (currently amended) The method of claim 2, wherein the interpreting the encoded channel data  
2 further comprises:  
3 identifying, based on the information of the header portion, one of the individual channels of the  
4 ~~set of channels~~ set of selected channels that contains a group of compressed video channels, wherein the  
5 channel of interest is within the group of compressed video channels; and  
6 isolating the channel of interest from the group of compressed video channels.

1 6. (currently amended) The method of claim 1 further comprises:  
2 receiving the ~~set of channels~~ set of selected channels by receiving packets of the encoded channel  
3 data, wherein the encoded channel data includes channel data from a plurality of sources, and wherein  
4 each of the packets includes a header portion and payload portion;  
5 interpreting the encoding channel data by interpreting information of the header portion of the  
6 packets to identify type of data of each channel provided by each of the plurality of sources; and  
7 determining filtering requirements to identify the channel of interest based on the type of data.

1 7. (original) The method of claim 6, wherein the determining the filtering requirements further  
2 comprises at least one of:

3 when the type of data is multi-channel compressed video, filtering the multi-channel compressed  
4 video to produce the channel of interest;

5 when the type of data is single channel compressed video, passing the single channel compressed  
6 video as the channel of interest;

7 when the type of data is multi-channel digitized video data, filtering the multi-channel digitized  
8 video data to produce the channel of interest;

9 when the type of data is single channel digitized video data, passing the single channel digitized  
10 video as the channel of interest;

11 when the type of data is multi-channel digital audio, filtering the multi-channel digital audio to  
12 produce the channel of interest;

13 when the type of data is single channel digital audio, passing the single channel digital audio as  
14 the channel of interest; and

15 when the type of data is network carried data, passing the network carried data as the channel of  
16 interest.

1 8. (currently amended) The method of claim 1 further comprises:

2 interpreting the encoded channel data to identify a series of channels of interest from the ~~set of~~  
3 ~~channels~~ set of selected channels based on a corresponding series of channel selection requests;

4 processing data of each of the series of channel of interest based on the type of channel of each of  
5 the channels of the series of channels of interest to produce a series of generic data; and

6 converting the series of generic data into the stream of data.

1 9. (original) The method of claim 1, wherein the processing the data of the channel of interest  
2 further comprises at least one of:

3 when the type of data is multi-channel compressed video, converting video data of the channel of  
4 interest into generic video data;

5 when the type of data is single channel compressed video, converting video data of the channel of  
6 interest into the generic video data;

7 when the type of data is multi-channel digitized video data, converting video data of the channel  
8 of interest into the generic video data;

9 when the type of data is single channel digitized video data, converting video data of the channel  
10 of interest into the generic video data;

11 when the type of data is multi-channel digital audio, converting audio data of the channel of  
12 interest into generic audio data;

13 when the type of data is single channel digital audio, converting audio data of the channel of  
14 interest into the generic audio data; and

15 when the type of data is network carried data, passing the network carried data as the channel of  
16 interest.

1 10. (original) The method of claim 9, wherein the converting to the generic video data further  
2 comprises at least one of:

3 converting the video data of the channel of interest into MPEG formatted video data;

4 converting the video data of the channel of interest into JPEG formatted video data;

5 converting the video data of the channel of interest into M-JPEG formatted video data;

6 converting the video data of the channel of interest into digital RGB video data; and

7 converting the video data of the channel of interest into digital YCbCr video data.

1 11. (original) The method of claim 9, wherein the converting to the generic audio data further  
2 comprises at least one of:

3 converting the audio data of the channel of interest into MPG formatted audio data;

4 converting the audio data of the channel of interest into MP3 formatted audio data; and

5 converting the audio data of the channel of interest into PCM digitized audio data.

1 12. (original) The method of claim 1, wherein the converting the generic data into a stream of data  
2 further comprises:

3 determining type of data of the channel of interest; and  
4 converting the generic data into the stream of data based on the type of data.

1 13. (original) The method of claim 12, wherein the converting the generic data further comprises at  
2 least one of:

3 when the type of data is multi-channel compressed video, converting the generic video data of the  
4 channel of interest into specific video data;

5 when the type of data is single channel compressed video, converting the generic video data of  
6 the channel of interest into the specific video data;

7 when the type of data is multi-channel digitized video data, converting the generic video data of  
8 the channel of interest into the specific video data;

9 when the type of data is single channel digitized video data, converting the generic video data of  
10 the channel of interest into the specific video data;

11 when the type of data is multi-channel digital audio, converting the generic audio data of the  
12 channel of interest into specific audio data;

13 when the type of data is single channel digital audio, converting the generic audio data of the  
14 channel of interest into specific audio data; and

15 when the type of data is network carried data, passing the network carried data of the channel of  
16 interest.

1 14. (currently amended) The method of claim 13, wherein the converting the generic video data of  
2 the channel of interest into specific video data further comprises:

3 performing a motion prediction on the generic video data to produce motion prediction data;

4 performing a discrete cosine transform on the motion prediction data to produce ~~DCT~~ Discrete  
5 Cosine Transform (DCT) data;

6 quantizing the DCT data to produce quantized data;

7 zigzag processing the quantized data to produce ZZ data; and

8 Huffman encoding the ZZ data to produce the specific video data.

1 15. (original) The method of claim 1 further comprises:  
2 determining the channel of interest is compressed among multiple compressed video channels;  
3 receiving a control signal indicating the type of processing of the data of the channel of interest;  
4 and  
5 when the control signal indicates multiple channel processing:  
6 decompressing the multiple compressed video channels to produce multiple channels;  
7 processing data of the of the multiple channels based on the type of channel to produce  
8 multiple generic data; and  
9 converting the multiple generic data into the stream of data.

1 16. (currently amended) A method for channel mixing in a multimedia system, the method  
2 comprises:  
3 receiving, from a multimedia source, a set of selected ~~a set of channels as~~ encoded channel data;  
4 interpreting the encoded channel data to identify ~~type of data~~ a data type of a channel of interest  
5 contained within the ~~set of channels~~ set of selected channels based on a specific channel selection request,  
6 wherein each channel of the set of selected channels has a data type;  
7 separating the channel of interest from the ~~set of channels~~ set of selected channels based on the  
8 type of data;  
9 processing the encoded channel data and the data of the channel of interest based on the ~~type of~~  
10 ~~data~~ data type to produce generic data for each channel of the set of selected channels; and  
11 ~~converting~~ combining the generic data into a stream of data; and  
12 transmitting the stream of data to a plurality of client devices, wherein the channel of interest is  
13 accessible by a client device of the plurality of client devices based upon the specific channel selection  
14 request.

1 17. (currently amended) The method of claim 16 further comprises:  
2 receiving the ~~set of channels~~ set of selected channels by receiving packets of the encoded channel  
3 data, wherein the encoded channel data includes channel data from a plurality of tuners associated with a  
4 multimedia source, and wherein each of the packets includes a header portion and payload portion; and  
5 interpreting the header portion of the packets to identify the type of data for the channel of  
6 interest.

1 18. (original) The method of claim 17 further comprises at least one:

2 reading an identifier for the channel of interest from the header portion of the packet to identify  
3 the type of data for the channel of interest; and

4 reading a source identifier from the header portion of the packet to identify the type of data for  
5 the channel of interest.

1 19. (currently amended) The method of claim 16 further comprises:

2 receiving the ~~set of channels~~ set of selected channels by receiving packets of the encoded channel  
3 data, wherein the encoded channel data includes channel data from a plurality of sources, and wherein  
4 each of the packets includes a header portion and payload portion;

5 interpreting the encoding channel data by interpreting information of the header portion of the  
6 packets to identify type of data of each channel provided by each of the plurality of sources; and

7 determining filtering requirements to identify the channel of interest based on the type of data to  
8 provide the separating of the channel of interest from the ~~set of channels~~ set of selected channels.

1 20. (currently amended) The method of claim 19, wherein the determining the filtering requirements  
2 further comprises at least one of:

3 when the type of data is multi-channel compressed video, filtering the multi-channel compressed  
4 video of the ~~set of channels~~ set of selected channels to separate the channel of interest;

5 when the type of data is single channel compressed video, passing the single channel compressed  
6 video as the channel of interest;

7 when the type of data is multi-channel digitized video data, filtering the multi-channel digitized  
8 video data of the ~~set of channels~~ set of selected channels to separate the channel of interest;

9 when the type of data is single channel digitized video data, passing the single channel digitized  
10 video as the channel of interest;

11 when the type of data is multi-channel digital audio, filtering the multi-channel digital audio of  
12 the ~~set of channels~~ set of selected channels to separate the channel of interest;

13 when the type of data is single channel digital audio, passing the single channel digital audio as  
14 the channel of interest; and

15 when the type of data is network carried data, passing the network carried data as the channel of  
16 interest.

1 21. (currently amended) The method of claim 16 further comprises:

2 interpreting the encoded channel data to identify a series of channels of interest from the ~~set of~~

3 ~~channels~~ set of selected channels based on a corresponding series of channel selection requests;

4 processing data of each of the series of channel of interest based on the type of data of each of the  
5 channels of the series of channels of interest to produce a series of generic data; and

6 converting the series of generic data into the stream of data.

1 22. (original) The method of claim 16, wherein the processing the data of the channel of interest  
2 further comprises at least one of:

3 when the type of data is multi-channel compressed video, converting video data of the channel of  
4 interest into generic video data;

5 when the type of data is single channel compressed video, converting video data of the channel of  
6 interest into the generic video data;

7 when the type of data is multi-channel digitized video data, converting video data of the channel  
8 of interest into the generic video data;

9 when the type of data is single channel digitized video data, converting video data of the channel  
10 of interest into the generic video data;

11 when the type of data is multi-channel digital audio, converting audio data of the channel of  
12 interest into generic audio data;

13 when the type of data is single channel digital audio, converting audio data of the channel of  
14 interest into the generic audio data; and

15 when the type of data is network carried data, passing the network carried data as the channel of  
16 interest.

1 23. (original) The method of claim 22, wherein the converting to the generic video data further  
2 comprises at least one of:

3 converting the video data of the channel of interest into MPEG formatted video data;

4 converting the video data of the channel of interest into JPEG formatted video data;

5 converting the video data of the channel of interest into M-JPEG formatted video data;

6 converting the video data of the channel of interest into digital RGB video data; and

7 converting the video data of the channel of interest into digital YCbCr video data.



1 24. (original) The method of claim 22, wherein the converting to the generic audio data further  
2 comprises at least one of:

- 3 converting the audio data of the channel of interest into MPG formatted audio data;
- 4 converting the audio data of the channel of interest into MP3 formatted audio data; and
- 5 converting the audio data of the channel of interest into PCM digitized audio data.

1 25. (original) The method of claim 16, wherein the converting the generic data further comprises at  
2 least one of:

3 when the type of data is multi-channel compressed video, converting the generic video data of the  
4 channel of interest into specific video data;

5 when the type of data is single channel compressed video, converting the generic video data of  
6 the channel of interest into the specific video data;

7 when the type of data is multi-channel digitized video data, converting the generic video data of  
8 the channel of interest into the specific video data;

9 when the type of data is single channel digitized video data, converting the generic video data of  
10 the channel of interest into the specific video data;

11 when the type of data is multi-channel digital audio, converting the generic audio data of the  
12 channel of interest into specific audio data;

13 when the type of data is single channel digital audio, converting the generic audio data of the  
14 channel of interest into specific audio data; and

15 when the type of data is network carried data, passing the network carried data of the channel of  
16 interest.

1 26. (currently amended) The method of claim 25, wherein the converting the generic video data of  
2 the channel of interest into specific video data further comprises:

3 performing a motion prediction on the generic video data to produce motion prediction data;

4 performing a discrete cosine transform on the motion prediction data to produce ~~DCT~~ Discrete  
5 Cosine Transform (DCT) data;

6 quantizing the DCT data to produce quantized data;

7 zigzag processing the quantized data to produce ZZ data; and

8 Huffman encoding the ZZ data to produce the specific video data.

1 27. (original) The method of claim 16 further comprises:  
2 determining the channel of interest is compressed among multiple compressed video channels;  
3 receiving a control signal indicating the type of processing of the data of the channel of interest;  
4 and  
5 when the control signal indicates multiple channel processing:  
6 decompressing the multiple compressed video channels to produce multiple channels;  
7 processing data of the of the multiple channels based on the type of channel to produce  
8 multiple generic data; and  
9 converting the multiple generic data into the stream of data.

1 28. (currently amended) A channel mixer for use in a multimedia system, the channel mixer  
2 comprises:  
3 stream parsing module operably coupled to receive, from a multimedia source, a set of selected ~~a~~  
4 ~~set of~~ channels as encoded channel data, wherein the stream parsing module generates generic data for ~~at~~  
5 ~~least one channel of the set of~~ each channel of the set of selected channels, wherein the and identifies at  
6 least one of the channels ~~is determined~~ based on a specific channel selection request; and  
7 data transcoding module operably coupled to ~~convert~~ combine the generic data of the at least one  
8 channel into a stream of data having a specific data format and for transmission of the data stream to a  
9 plurality of client devices, wherein the at least one identified channel is accessible from the data stream by  
10 a client device of the plurality of client devices based upon the specific channel selection request.

1 29. (original) The channel mixer of claim 28 further comprises:  
2 memory; and  
3 memory controller operably coupled to the memory, the stream parsing module and the data  
4 transcoding module, wherein the memory controller controls reading and writing of data to the memory  
5 by the stream parsing module and the data transcoding module.

1 30. (original) The channel mixer of claim 28, wherein the stream parsing module further comprises:  
2 plurality of bit stream modules, wherein each of the plurality of bit stream modules filters the  
3 encoded channel data to produce a separate channel of interest based on a corresponding channel  
4 selection request of a plurality of channel selection requests; and  
5 processor operably coupled to the plurality of bit stream modules, wherein the processor  
6 generates generic data for each of the separate channels of interest based on type of data for each of the  
7 separate channels of interest.

- 1 31. (original) The channel mixer of claim 30, wherein each of the plurality of bit stream modules  
2 further comprises:  
3 interpreter operably coupled to receive a plurality of packets containing the encoded channel data,  
4 wherein the interpreter interprets the packets to identify type of data for the channel of interest, and  
5 wherein the filtering performed by each of the plurality of bit stream modules is dependent on the type of  
6 data.
- 1 32. (original) The channel mixer of claim 30 further comprises:  
2 input bit bucket operably coupled to the processor and the memory controller, wherein the input  
3 bit bucket provides byte to bit conversion of data stored in the memory.
- 1 33. (original) The channel mixer of claim 30 further comprises:  
2 decoder instruction packet module operably coupled to the memory controller and the transcoding  
3 module, wherein the decoder instruction packet module coordinates pipelining of data through the  
4 transcoding module.
- 1 34. (previously presented) The channel mixer of claim 33, wherein the transcoding module further  
2 comprises:  
3 MPEG decoding module operably coupled to the memory controller and to the decoder  
4 instruction packet module, wherein the MPEG decoding module decodes MPEG encoded video data; and  
5 MPEG encoding module operably coupled to the memory controller and to the decoder  
6 instruction packet module, wherein the MPEG encoding module encodes generic video data into MPEG  
7 video data.
- 1 35. (original) The channel mixer of claim 30 further comprises:  
2 system bus interface operably coupled to the processor, wherein the system bus interface provides  
3 interfacing to at least one of: system processor and system memory.
- 1 36. (original) The channel mixer of claim 30 further comprises:  
2 digital to analog converter for the stream of data into analog signals.

1 37. (currently amended) An apparatus for channel mixing in a multimedia system, the apparatus  
2 comprises:  
3 processing module; and  
4 memory operably coupled to the processing module, wherein the memory includes operational  
5 instructions that cause the processing module to:  
6 receive, from a multimedia source, a set of selected ~~a set of~~ channels as encoded channel  
7 data;  
8 interpret the encoded channel data to identify a channel of interest of the set of selected  
9 channels based on a specific channel selection request, wherein each channel of the set of selected  
10 channels has a data type;  
11 process the encoded channel data, which includes data of the channel of interest, ~~data of~~  
12 ~~the channel of interest~~ based on the data type ~~type of channel~~ to produce generic data for each  
13 channel of the set of selected channels; ~~and~~  
14 ~~convert~~ combine the generic data into a stream of data; and  
15 transmit the stream of data to a plurality of client devices, wherein the channel of interest  
16 is accessible from the stream of data by a client device of the plurality of client devices based  
17 upon the specific channel selection request.

1 38. (currently amended) The apparatus of claim 37, wherein the memory further comprises  
2 operational instructions that cause the processing module to:  
3 receive the ~~set of channels~~ set of selected channels by receiving packets of the encoded channel  
4 data, wherein the encoded channel data includes channel data from a plurality of tuners associated with a  
5 multimedia source, and wherein each of the packets includes a header portion and payload portion; and  
6 interpret the encoding channel data by interpreting information of the header portion of the  
7 packets to identify individual channels of the ~~set of channels~~ set of selected channels.

1 39. (currently amended) The apparatus of claim 38, wherein the memory further comprises  
2 operational instructions that cause the processing module to interpret the encoded channel data by:  
3 identifying the channel of interest as one of the individual channels of the ~~set of channels~~ set of  
4 selected channels based on the information of the header portion.

1 40. (currently amended) The apparatus of claim 39, wherein the memory further comprises  
2 operational instructions that cause the processing module to identify the channel of interest by ~~at least one~~  
3 at least one of:

4 reading an identifier for the channel of interest from the header portion of the packet to identify  
5 the channel of interest; and

6 reading a source identifier from the header portion of the packet to identify the channel of  
7 interest.

1 41. (currently amended) The apparatus of claim 38, wherein the memory further comprises  
2 operational instructions that cause the processing module to interpret the encoded channel data by:  
3 identifying, based on the information of the header portion, one of the individual channels of the  
4 ~~set of channels~~ set of selected channels that contains a group of compressed video channels, wherein the  
5 channel of interest is within the group of compressed video channels; and

6 isolating the channel of interest from the group of compressed video channels.

1 42. (currently amended) The apparatus of claim 37, wherein the memory further comprises  
2 operational instructions that cause the processing module to:

3 receive the ~~set of channels~~ set of selected channels by receiving packets of the encoded channel  
4 data, wherein the encoded channel data includes channel data from a plurality of sources, and wherein  
5 each of the packets includes a header portion and payload portion;

6 interpret the encoding channel data by interpreting information of the header portion of the  
7 packets to identify type of data of each channel provided by each of the plurality of sources; and

8 determine filtering requirements to identify the channel of interest based on the type of data.

1 43. (original) The apparatus of claim 42, wherein the memory further comprises operational  
2 instructions that cause the processing module to determine the filtering requirements by at least one of:  
3 when the type of data is multi-channel compressed video, filtering the multi-channel compressed  
4 video to produce the channel of interest;  
5 when the type of data is single channel compressed video, passing the single channel compressed  
6 video as the channel of interest;  
7 when the type of data is multi-channel digitized video data, filtering the multi-channel digitized  
8 video data to produce the channel of interest;  
9 when the type of data is single channel digitized video data, passing the single channel digitized  
10 video as the channel of interest;  
11 when the type of data is multi-channel digital audio, filtering the multi-channel digital audio to  
12 produce the channel of interest;  
13 when the type of data is single channel digital audio, passing the single channel digital audio as  
14 the channel of interest; and  
15 when the type of data is network carried data, passing the network carried data as the channel of  
16 interest.

1 44. (currently amended) The apparatus of claim 37, wherein the memory further comprises  
2 operational instructions that cause the processing module to:  
3 interpret the encoded channel data to identify a series of channels of interest from the ~~set of~~  
4 ~~channels~~ set of selected channels based on a corresponding series of channel selection requests;  
5 process data of each of the series of channel of interest based on the type of channel of each of the  
6 channels of the series of channels of interest to produce a series of generic data; and  
7 convert the series of generic data into the stream of data.

1 45. (original) The apparatus of claim 37, wherein the memory further comprises operational  
2 instructions that cause the processing module to process the data of the channel of interest by at least one  
3 of:

4 when the type of data is multi-channel compressed video, converting video data of the channel of  
5 interest into generic video data;

6 when the type of data is single channel compressed video, converting video data of the channel of  
7 interest into the generic video data;

8 when the type of data is multi-channel digitized video data, converting video data of the channel  
9 of interest into the generic video data;

10 when the type of data is single channel digitized video data, converting video data of the channel  
11 of interest into the generic video data;

12 when the type of data is multi-channel digital audio, converting audio data of the channel of  
13 interest into generic audio data;

14 when the type of data is single channel digital audio, converting audio data of the channel of  
15 interest into the generic audio data; and

16 when the type of data is network carried data, passing the network carried data as the channel of  
17 interest.

1 46. (original) The apparatus of claim 45, wherein the memory further comprises operational  
2 instructions that cause the processing module to converting to the generic video data by at least one of:

3 converting the video data of the channel of interest into MPEG formatted video data;

4 converting the video data of the channel of interest into JPEG formatted video data;

5 converting the video data of the channel of interest into M-JPEG formatted video data;

6 converting the video data of the channel of interest into digital RGB video data; and

7 converting the video data of the channel of interest into digital YCbCr video data.

1 47. (original) The apparatus of claim 45, wherein the memory further comprises operational  
2 instructions that cause the processing module to convert to the generic audio data by at least one of:

3 converting the audio data of the channel of interest into MPG formatted audio data;

4 converting the audio data of the channel of interest into MP3 formatted audio data; and

5 converting the audio data of the channel of interest into PCM digitized audio data.

1 48. (original) The apparatus of claim 37, wherein the memory further comprises operational  
2 instructions that cause the processing module to convert the generic data into a stream of data by:  
3 determining type of data of the channel of interest; and  
4 converting the generic data of the stream of data into the stream of data based on the type of data.

1 49. (original) The apparatus of claim 48, wherein the memory further comprises operational  
2 instructions that cause the processing module to converting the generic data by at least one of:  
3 when the type of data is multi-channel compressed video, converting the generic video data of the  
4 channel of interest into specific video data;  
5 when the type of data is single channel compressed video, converting the generic video data of  
6 the channel of interest into the specific video data;  
7 when the type of data is multi-channel digitized video data, converting the generic video data of  
8 the channel of interest into the specific video data;  
9 when the type of data is single channel digitized video data, converting the generic video data of  
10 the channel of interest into the specific video data;  
11 when the type of data is multi-channel digital audio, converting the generic audio data of the  
12 channel of interest into specific audio data;  
13 when the type of data is single channel digital audio, converting the generic audio data of the  
14 channel of interest into specific audio data; and  
15 when the type of data is network carried data, passing the network carried data of the channel of  
16 interest.



1 50. (currently amended) The apparatus of claim 49, wherein the memory further comprises  
2 operational instructions that cause the processing module to convert the generic video data of the channel  
3 of interest into specific video data by:

4 performing a motion prediction on the generic video data to produce motion prediction data;  
5 performing a discrete cosine transform on the motion prediction data to produce ~~DCT~~ Discrete  
6 Cosine Transform (DCT) data;  
7 quantizing the DCT data to produce quantized data;  
8 zigzag processing the quantized data to produce ZZ data; and  
9 Huffman encoding the ZZ data to produce the specific video data.

1 51. (original) The apparatus of claim 37, wherein the memory further comprises operational  
2 instructions that cause the processing module to:  
3 determine the channel of interest is compressed among multiple compressed video channels;  
4 receive a control signal indicating the type of processing of the data of the channel of interest; and  
5 when the control signal indicates multiple channel processing:  
6 decompress the multiple compressed video channels to produce multiple channels;  
7 process data of the of the multiple channels based on the type of channel to produce  
8 multiple generic data; and  
9 convert the multiple generic data into the stream of data.

1 52. (currently amended) An apparatus for channel mixing in a multimedia system, the apparatus  
2 comprises:

3 processing module; and

4 memory operably coupled to the processing module, wherein the memory includes operational  
5 instructions that cause the processing module to:

6 receive, from a multimedia source, a set of selected ~~a set of~~ channels as encoded channel  
7 data;

8 interpret the encoded channel data to identify ~~type of data~~ a data type of a channel of  
9 interest contained within the ~~set of channels~~ set of selected channels based on a specific channel  
10 selection request, ~~wherein each channel of the set of selected channels has a data type~~;

11 separate the channel of interest from the ~~set of channels~~ set of selected channels based on  
12 the ~~type of data~~ data type;

13 process the encoded channel data and the data of the identified channel of interest based  
14 on the ~~type of data~~ the data type of each channel of the set of selected channels to produce generic  
15 data; ~~and~~

16 ~~convert~~ combine the generic data into a stream of data; and

17 transmit the stream of data to a plurality of client devices, wherein the channel of interest  
18 is accessible by a client device of the plurality of client devices based upon the specific channel  
19 selection request.

1 53. (currently amended) The apparatus of claim 52, wherein the memory further comprises  
2 operational instructions that cause the processing module to:

3 receive the ~~set of channels~~ set of selected channels by receiving packets of the encoded channel  
4 data, wherein the encoded channel data includes channel data from a plurality of tuners associated with a  
5 multimedia source, and wherein each of the packets includes a header portion and payload portion; and

6 interpret the header portion of the packets to identify the type of data for the channel of interest.

1 54. (original) The apparatus of claim 53, wherein the memory further comprises operational  
2 instructions that cause the processing module to identify the type of data by at least one:

3 reading an identifier for the channel of interest from the header portion of the packet to identify  
4 the type of data for the channel of interest; and

5 reading a source identifier from the header portion of the packet to identify the type of data for  
6 the channel of interest.

1 55. (currently amended) The apparatus of claim 52, wherein the memory further comprises  
2 operational instructions that cause the processing module to:  
3 receive the ~~set of channels~~ set of selected channels by receiving packets of the encoded channel  
4 data, wherein the encoded channel data includes channel data from a plurality of sources, and wherein  
5 each of the packets includes a header portion and payload portion;  
6 interpret the encoding channel data by interpreting information of the header portion of the  
7 packets to identify type of data of each channel provided by each of the plurality of sources; and  
8 determine filtering requirements to identify the channel of interest based on the type of data to  
9 provide the separating of the channel of interest from the ~~set of channels~~ set of selected channels.

1 56. (currently amended) The apparatus of claim 55, wherein the memory further comprises  
2 operational instructions that cause the processing module to determine the filtering requirements by at  
3 least one of:  
4 when the type of data is multi-channel compressed video, filtering the multi-channel compressed  
5 video of the ~~set of channels~~ set of selected channels to separate the channel of interest;  
6 when the type of data is single channel compressed video, passing the single channel compressed  
7 video as the channel of interest;  
8 when the type of data is multi-channel digitized video data, filtering the multi-channel digitized  
9 video data of the ~~set of channels~~ set of selected channels to separate the channel of interest;  
10 when the type of data is single channel digitized video data, passing the single channel digitized  
11 video as the channel of interest;  
12 when the type of data is multi-channel digital audio, filtering the multi-channel digital audio of  
13 the ~~set of channels~~ set of selected channels to separate the channel of interest;  
14 when the type of data is single channel digital audio, passing the single channel digital audio as  
15 the channel of interest; and  
16 when the type of data is network carried data, passing the network carried data as the channel of  
17 interest.

1 57. (currently amended) The apparatus of claim 52, wherein the memory further comprises  
2 operational instructions that cause the processing module to:  
3 interpret the encoded channel data to identify a series of channels of interest from the ~~set of~~  
4 ~~channels~~ set of selected channels based on a corresponding series of channel selection requests;  
5 process data of each of the series of channel of interest based on the type of data of each of the  
6 channels of the series of channels of interest to produce a series of generic data; and  
7 convert the series of generic data into the stream of data.

1 58. (original) The apparatus of claim 52, wherein the memory further comprises operational  
2 instructions that cause the processing module to process the data of the channel of interest by at least one  
3 of:  
4 when the type of data is multi-channel compressed video, converting video data of the channel of  
5 interest into generic video data;  
6 when the type of data is single channel compressed video, converting video data of the channel of  
7 interest into the generic video data;  
8 when the type of data is multi-channel digitized video data, converting video data of the channel  
9 of interest into the generic video data;  
10 when the type of data is single channel digitized video data, converting video data of the channel  
11 of interest into the generic video data;  
12 when the type of data is multi-channel digital audio, converting audio data of the channel of  
13 interest into generic audio data;  
14 when the type of data is single channel digital audio, converting audio data of the channel of  
15 interest into the generic audio data; and  
16 when the type of data is network carried data, passing the network carried data as the channel of  
17 interest.

1 59. (original) The apparatus of claim 58, wherein the memory further comprises operational  
2 instructions that cause the processing module to convert to the generic video data by at least one of:  
3 converting the video data of the channel of interest into MPEG formatted video data;  
4 converting the video data of the channel of interest into JPEG formatted video data;  
5 converting the video data of the channel of interest into M-JPEG formatted video data;  
6 converting the video data of the channel of interest into digital RGB video data; and  
7 converting the video data of the channel of interest into digital YCbCr video data.

1 60. (original) The apparatus of claim 58, wherein the memory further comprises operational  
2 instructions that cause the processing module to convert to the generic audio data by at least one of:  
3 converting the audio data of the channel of interest into MPG formatted audio data;  
4 converting the audio data of the channel of interest into MP3 formatted audio data; and  
5 converting the audio data of the channel of interest into PCM digitized audio data.

1 61. (original) The apparatus of claim 52, wherein the memory further comprises operational  
2 instructions that cause the processing module to convert the generic data by at least one of:  
3 when the type of data is multi-channel compressed video, converting the generic video data of the  
4 channel of interest into specific video data;  
5 when the type of data is single channel compressed video, converting the generic video data of  
6 the channel of interest into the specific video data;  
7 when the type of data is multi-channel digitized video data, converting the generic video data of  
8 the channel of interest into the specific video data;  
9 when the type of data is single channel digitized video data, converting the generic video data of  
10 the channel of interest into the specific video data;  
11 when the type of data is multi-channel digital audio, converting the generic audio data of the  
12 channel of interest into specific audio data;  
13 when the type of data is single channel digital audio, converting the generic audio data of the  
14 channel of interest into specific audio data; and  
15 when the type of data is network carried data, passing the network carried data of the channel of  
16 interest.

1 62. (currently amended) The apparatus of claim 61, wherein the memory further comprises  
2 operational instructions that cause the processing module to convert the generic video data of the channel  
3 of interest into specific video data:  
4 performing a motion prediction on the generic video data to produce motion prediction data;  
5 performing a discrete cosine transform on the motion prediction data to produce ~~DCT~~ Discrete  
6 Cosine Transform (DCT) data;  
7 quantizing the DCT data to produce quantized data;  
8 zigzag processing the quantized data to produce ZZ data; and  
9 Huffman encoding the ZZ data to produce the specific video data.

- 1 63. (original) The apparatus of claim 52, wherein the memory further comprises operational  
2 instructions that cause the processing module to:
- 3 determine the channel of interest is compressed among multiple compressed video channels;  
4 receive a control signal indicating the type of processing of the data of the channel of interest; and  
5 when the control signal indicates multiple channel processing:
- 6 decompress the multiple compressed video channels to produce multiple channels;  
7 process data of the of the multiple channels based on the type of channel to produce  
8 multiple generic data; and  
9 convert the multiple generic data into the stream of data.